(19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 13 October 2005 (13.10.2005)

(10) International Publication Number WO 2005/096438 A1

(51) International Patent Classification7: H01O 9/04, 1/24

(21) International Application Number:

PCT/EP2005/001582

(22) International Filing Date: 17 February 2005 (17.02.2005)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

04006810.8 60/557,593

22 March 2004 (22.03.2004) EP 30 March 2004 (30.03.2004)

(71) Applicant (for all designated States except US): SONY ERICSSON MOBILE COMMUNICATIONS AB [SE/SE]; S-221 88 Lund (SE).

(72) Inventor; and

(75) Inventor/Applicant (for US only): GOLD, Kristina [SE/SE]; Törnlundsgatan 1, S-753 24 Uppsala (SE).

(74) Agent: DAHNÉR, Christer; Valea AB, P.O. Box 7086. S-103 87 Stockholm (SE).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

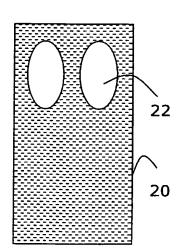
of inventorship (Rule 4.17(iv)) for US only

Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: RAISING ANTENNA EFFICIENCY FOR A PORTABLE COMMUNICATION DEVICE



(57) Abstract: The present invention relates to a portable communication device comprising a board (12) for receiving electrical circuits and that includes a ground plane (20) and has at least one throughhole (22), an antenna element provided on one side of the board, and an acoustic element (24, 26, 28) placed on the board aligned with the throughhole. An electrically conducting material (28) related to the exterior of the acoustic element is connected (30, 32) to the ground plane of the board for enhancing the efficiency of the antenna.



WO 2005/096438 A1